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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,989	03/22/2004	Takahiro Tokunaga	4041K-000192	1370

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EXAMINER
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FORD, JOHN K

ART UNIT	PAPER NUMBER
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3744

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/15/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/805,989

Applicant(s)

TOKUNAGA ET AL.

Examiner

John K. Ford

Art Unit

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on Nov 9, 2006
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 3, 4, 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 11/09/06 + 3/22/04
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 3744

Applicant's response of November 9, 2006, with an election of the species of Figures 1-8, without traverse, is acknowledged. Applicant has identified claims 1, 2 and 5-9 as readable on the elected species.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 depends from claim 7 but none of the first and second, cold and hot air doors find antecedent basis in claim 9. Was the dependency of claim 9 from claim 7 some sort of typographical error? These terms do find antecedent basis in claim 1 for example, however claim 8, which is, but for its pendency, identical to claim 9 already depends from claim 1. Please remedy this problem appropriately.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 3744

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 61-188214.

Applicant has sent in a translation of a JPO office action that rejects a claim 7 in the corresponding Japanese prosecution over this reference and that translation is incorporated here by reference in lieu of a separate explanation here. Unfortunately, since applicant provided no copies of the claims being examined by the JPO, this examiner is left to guess that claim 7 in the JPO is the same as claim 7 here. Please provide a copy of the translated claims that correspond to this JPO office action and, in the future, with these translated office actions. Moreover to properly appreciate the JPO rejection, a complete explanation or a translation of the relevant portions of JP '214 that explains how doors 16a and 16b (applicant's claimed "first door means" and "second door means") are controlled, is required. Nonetheless, visually, considering the door positions of doors 16a and 16b shown in Figures 4-8 of JP '214 and what the JPO office action states, it does appear that claim 7 is anticipated.

Claim 1, 2 and 6-9 are rejected under 35 U.S.C. 103(a) as obvious over the combined teachings of the un-illustrated two-zone embodiment described in col. 2, lines 8-13 of Heinle et al (USP 5,086,830) and Uemura et al (USP 6,293,339).

Heinle in the un-illustrated two-zone embodiment described in col. 2, lines 8-13 of Heinle et al (USP 5,086,830) discloses a total of four flaps. Two of these four flaps (i.e. flap 24 and flap 25) are shown in Figure 1. One of ordinary skill would understand from the description of un-illustrated two-zone embodiment described in col. 2, lines 8-13 of Heinle et al (USP 5,086,830) that a central partition (such as shown in Denso owned Uemura '339, Figure 2, vertical partition 41, described in col. 5, line 49 - col. 6, line 4, incorporated here by reference) divides the casing of Heinle in half (as described in the incorporated section of the Uemura reference) with the other two of these four flaps (i.e. flap 24' and flap 25', for purposes of future reference) would be in Figure 1 behind corresponding flaps 24 and 25 with the vertical partition (described in Uemura) located between flaps 24 and 24' & flaps 25 and 25' and dividing the casing of Heinle in half to the various downstream discharges. Separate jets 21 and 21' (to continue with the above nomenclature) would discharge air to the right and left zones (i.e. the driver and passenger sides) of the main compartment. In other words, everything shown in Figure 1 of Heinle, downstream of the evaporator 11 of Heinle, would be duplicated on the other side of the vertical partition described above. If for some reason applicants do not understand the vertical partition explanation, which should be pretty familiar to

Art Unit: 3744

engineers at Denso given the number of patents (including Uemura) that are of Denso origin that disclose these partitions, please call the examiner with any questions.

Finally, Heinle clearly teaches how to control doors 24 and 25 to both control volume flow and temperature in a single zone simultaneously. Since Heinle already contemplates a dual zone system in col. 2, lines 8-13, to have extended the algorithm disclosed in Heinle for controlling flaps 24 and 25 to control all four flaps 24 and 24' & flaps 25 and 25' in a two zone embodiment would have been obvious to one of ordinary skill in the art since it is explicitly contemplated in Heinle. Two zone systems advantageously allow the driver and passenger to set their individual preferences as to air volume and temperature thereby increasing occupant comfort.

Regarding claim 2, continuing with the above explanation, to have duplicated temperature control 29 and volume control 30 for the other zone as temperature control 29' and volume control 30' would have been obvious in a two zone embodiment explicitly contemplated in Heinle. Two zone systems advantageously allow the driver and passenger to set their individual preferences as to air volume and temperature thereby increasing occupant comfort.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 1 above, and further in view of Schwarz (USP 6,278,083).

Art Unit: 3744


In col. 4, lines 34-36 Schwarz teaches the art recognized equivalence of flaps such as shown in Heinle and film doors. To have substituted film doors for each of the four flaps 24 and 24' & flaps 25 and 25' in a two zone embodiment of Heinle (described above) would have been obvious to one of ordinary skill in the art. Despite their complexity, film doors are known to have at least one advantage over flap doors and that is they generally take up less space inside the HVAC casing and therefore permit an advantageous overall size reduction of the HVAC.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John K. Ford whose telephone number is 571-272-4911. The examiner can normally be reached on Mon.-Fri. 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3744

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**John K. Ford**  
**Primary Examiner**